

DETAILED ACTION

1. Applicant's amendment was received May 18, 2010. Claims 1 and 5 were amended.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Leah Reimer on July 27, 2010.

The application has been amended as followed:

Cancel claims 4 and 10.

Claim Rejections - 35 USC § 103

3. The claim rejections under 35 U.S.C. 103(a) as unpatentable over Maeda et al. (U.S. Pat. No. 6,998,071) and Langan (U.S. Pat. No. 4,913,988) on claims 1, 4, 5 and 10 are withdrawn because independent claims 1 and 5 have been amended and claims 4 and 10 were cancelled.

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4. The claim rejections under 35 U.S.C. 103(a) as unpatentable over Maeda et al. (U.S. Pat. No. 6,998,071), Langan (U.S. Pat. No. 4,913,988) and Hibara (JP 2002-8718) on claim 6 is withdrawn, because independent claim 5 was amended.

5. The claim rejections under 35 U.S.C. 103(a) as unpatentable over Maeda et al. (U.S. Pat. No. 6,998,071), Langan (U.S. Pat. No. 4,913,988), Hibara (JP 2002-8718) and Unoki et al. (JP 2002-083632) on claim 7 is withdrawn, because independent claim 5 was amended.

Allowable Subject Matter

6. Claims 1 and 5-7 are allowed. The following is an examiner's statement of reasons for allowance: No prior art teaches or suggests a cathode for a lithium ion battery with a cathode active material particles, a metal hydroxide particles having a specific surface area of between $2.5 \text{ m}^2/\text{g}$ and $100 \text{ m}^2/\text{g}$, a conductive agent, and a binder, wherein the metal hydroxide particles are present in an amount of greater than 0 wt% and less than 10 wt%, and the cathode active material particles and the metal hydroxide particles in the cathode are a uniform mixture with each other, and wherein the metal hydroxide is $\text{Al}(\text{OH})_3$ having an average particle size of $0.8\text{-}8 \text{ }\mu\text{m}$ or $\text{Mg}(\text{OH})_2$ having an average particle size of $1.0\text{-}9 \text{ }\mu\text{m}$.

The closest prior art is Maeda et al. (U.S. Pat. No. 6,998,071). Maeda teaches a lithium non-aqueous electrolyte secondary cell comprising a cathode active material, comprising cobalt oxide particles surface-coated with magnesium hydroxide, where the entire cobalt particle with the magnesium coated ($\text{LiCo}_{(1-x)}\text{Mg}_x\text{O}_2$) onto it has an average

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particle diameter of 1.0-20 μm (see claim 1, Ex. 1). Maeda further discloses that the composition of the magnesium hydroxide has a BET specific area value of 0.5 to 50 m^2/g (see col. 2, lines 19-31 and col. 3, lines 7-17) and teaches a conductive agent and a binder (see col. 9, lines 53-59), but is silent about the metal hydroxide being present as a particle in an amount of greater than 0 weight percent and less than 10 weight percent and where the metal hydroxide is $\text{Al}(\text{OH})_3$ that has an having an average particle size of 0.8-8 μm or $\text{Mg}(\text{OH})_2$ having an average particle size of 1.0-9 μm .

Other references considered were Langan (U.S. Pat. No. 4,913,988), Hibara (JP 2002-8718) and Unoki et al. (JP 2002-083632).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PATRICIA DAVIS whose telephone number is (571)270-7868. The examiner can normally be reached on 7:30am-5pm EST. Monday-Friday, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on 571-272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/PATRICIA DAVIS/
Examiner, Art Unit 1795

/Dah-Wei D. Yuan/
Supervisory Patent Examiner, Art Unit 1795